What is claimed is:

1. A high-brightness phosphor screen, comprising:

a luminescent material for emitting light of a predetermined color, used for color image display; and

a ZnO:Zn phosphor capable of enhancing the brightness of the display,

wherein the mixing ratio of the luminescent material to the ZnO:Zn phosphor is varied according to a desired level of brightness.

2. The high-brightness phosphor screen of claim 1, wherein the luminescent material is a blue or green light-emitting phosphor.

3. The high-brightness phosphor screen of claim 2, wherein the blue light-emitting phosphor is at least one sulfide based phosphor selected from the group consisting of ZnS:Ag,Cl, ZnS:Ag,Cl,Al, (Zn,Cd)S:Ag, ZnS:Ag,Cl,Al,Mg, (Zn,Cd)S:Ag,Cl, (Zn,Cd)S:Ag,Cl,Al, and (Zn,Cd)S:Ag,Cl,Mg.

4. The high-brightness phosphor screen of claim 2, wherein the green light-emitting phosphor is at least one sulfide based phosphor selected from the group consisting of ZnS:Cu,Al, ZnS:Cu, ZnS:Cu,Al,Au, (Zn,Cd)S:Cu,Al, (Zn,Cd)S:Cu and (Zn,Cd)S:Cu,Al,Au.

5. The high-brightness phosphor screen of claim 1, wherein the amount of the ZnO:Zn phosphor added is 20% or less by weight based on the weight of the luminescent material.

6. A method for forming a high-brightness phosphor screen by mixing a luminescent material for emitting light of a predetermined color and a predetermined amount of a ZnO:Zn phosphor, the method comprising the steps of:

(a) preparing a phosphor mixture solution by dispersing the luminescent material and the ZnO:Zn phosphor in a solvent;

(b) forming a phosphor layer by depositing the phosphor mixture solvent on a substrate; and

(d) evaporating the solvent from the deposited phosphor layer.

7. The method of claim 6, wherein, in step (a), the luminescent material is a blue or green light-emitting phosphor.

8. The method of claim 7, wherein the blue light-emitting phosphor is at least one sulfide based phosphor selected from the group consisting of ZnS:Ag,Cl, ZnS:Ag,Cl,Al, (Zn,Cd)S:Ag, ZnS:Ag,Cl,Al,Mg, (Zn,Cd)S:Ag,Cl, (Zn,Cd)S:Ag,Cl,Al, and (Zn,Cd)S:Ag,Cl,Mg.

9. The method of claim 7, wherein the green light-emitting phosphor is at least one sulfide based phosphor selected from the group consisting of ZnS:Cu,Al, ZnS:Cu, ZnS:Cu,Al,Au, (Zn,Cd)S:Cu,Al, (Zn,Cd)S:Cu and (Zn,Cd)S:Cu,Al,Au.

10. The method of claim 6, wherein the amount of the ZnO:Zn phosphor added is 20% or less by weight based on the weight of the luminescent material.

11. The method of claim 6, wherein, in step (b), the phosphor layer is formed by depositing the phosphor mixture solution on the substrate with the application of electrophoresis, screening, photolithography or precipitation.